

To: Thilsted, Eugene[thilsted.eugene@epa.gov]; Rabe, Bonnie[BRabe@nmda.nmsu.edu]; Irene King[IKing@nmda.nmsu.edu]; SBaca@nmda.nmsu.edu[SBaca@nmda.nmsu.edu]; Lewis, Marjorie[MLewis@nmda.nmsu.edu]
Cc: Carroll, Craig[carroll.craig@epa.gov]
From: Weiler, Gregory
Sent: Thur 8/13/2015 7:46:05 PM
Subject: Gold King Mine Response....write up for August 10, 2015....including agricultural information



United States Environmental Protection Agency

Updates to EPA's Response to 2015 Release from Gold King Mine

- August 10, 2015

EPA Region 8 has deployed a large response team to Durango and Silverton, Colorado and to several locations in New Mexico, Utah and the Navajo Reservation to coordinate with affected states, tribes and communities on various response activities and to address impacts associated with the Gold King mine wastewater release.

EPA's primary objectives include working with federal, state, tribal and local authorities to make sure that people continue to have access to safe drinking water, ensure appropriate precautions are in place for recreational use and contact with river water, evaluate impacts to aquatic life and fish populations, and stop the flow of contaminated water into the watershed at the Gold King Mine site.

Aerial and ground reconnaissance indicates that the plume associated with the Gold King Mine release has dissipated downstream, and there is no leading edge of contamination visible in downstream sections of the San Juan River or Lake Powell.

EPA has also taken steps to capture and treat the discharge at the Gold King mine, addressing the risk of additional downstream impacts. We have constructed four ponds at the mine site and which are treating water to remove as much metal loading as possible in this situation. Over the next several days, EPA will make upgrades to the system to ensure its continued operation.

EPA is collecting and assessing water quality from the Animas and San Juan Rivers daily. Over the next several days, we will be jointly evaluating data and information with partners to determine when access to the Animas River will be restored for activities and uses such as

rafting, fishing, irrigation, and drinking water. EPA, tribal, state and local officials are coordinating these decisions based on sampling data, risk screening levels, and other related factors. We do not anticipate any reopening decisions until at least August 17. The timing of these decisions could vary among local, state and tribal governments based on local conditions and by uses. Until notified otherwise, people should continue to abide by existing closures.

The assessment of impacts to wildlife and fish populations is ongoing. To date we have seen no indication of widespread fish mortality in the Animas or San Juan. Fish cages placed directly in the Animas River by the State of Colorado Division of Parks and Wildlife for two days indicate one mortality out of 108 fish tested. The State will be evaluating those and other ecological impacts with partners as we move forward. EPA is also working with the New Mexico Department of Game Fish and the U.S. Fish and Wildlife Service to investigate reports of impacts to wildlife.

EPA has established a response center in Durango, Colorado and has deployed ten On Scene Coordinators in Silverton, Durango and Farmington, New Mexico. Water quality experts and several technicians and contractors will respond to the discharge as it reaches communities in New Mexico. Two Public Information Officers (PIOs) are also on site in Durango at the Joint Information Center (JIC). Two Community Involvement Coordinators (CICs) were deployed to Farmington yesterday and met with local Navajo Chapter officials and hosted public meetings. The CICs will also partner with Navajo Nation EPA (NNEPA) and Navajo Department of Public Safety to ensure comprehensive outreach to all affected Navajo Chapters. EPA is using several contracting mechanisms to provide support for the response, which includes water quality sampling, drinking water and agricultural water distribution as well as construction and maintenance of the water treatment ponds.

In New Mexico, EPA has a team of two federal on-scene coordinators, two water quality experts and ten technicians and contractors responding to the spill as it reaches communities in the state. Additional personnel are arriving in Farmington and will total 26 employees and contractors by the end of the day. Staffing is expected to continue to grow to support outreach and door-to-door canvassing. EPA mobile command center has arrived in Farmington and will be fully operational later today. EPA is also co-locating personnel with NMED in Santa Fe to enhance planning and communication between the agencies.

EPA is continuing to collect water quality samples from nine locations in the river near intakes for Aztec, Farmington, the Lower Valley Water Users Association, the Morning Star Water Supply System and the North Star Water User Association. Each of these locations will continue to be monitored as the spill makes its way past these areas. EPA has two dedicated water quality experts available in New Mexico to assist the five drinking water systems.

Working with San Juan County, New Mexico officials, EPA is providing alternative water supply for livestock in New Mexico.

EPA and New Mexico Environment Department are providing free water quality testing for domestic drinking water wells along the river. Teams of qualified technicians are going door-to-door to collect samples for laboratory analysis.

At 7 p.m. on Sunday, August 9, New Mexico Environment Secretary notified EPA that the New Mexico Department of Game and Fish needed help responding to reports of wildlife that may have been impacted by the release. EPA immediately connected New Mexico Fish & Game with the US Fish & Wildlife Service (USFWS). NM Fish & Game is sending one biologist and two game wardens to assess the situation today and will follow up with USFWS. The USFWS has requested EPA contract with a wildlife rehabilitator to assist with cleaning any animals. USFWS will provide capture and oversight of the operations for the state.

On Saturday (Aug. 8) the president of the Navajo Nation declared a State of Emergency for the San Juan River valley. On Sunday, President Begaye and his staff toured the Gold King Mine site. The president and his staff then attended the community meeting in Durango.

Navajo officials have reacted quickly, assessing their well fields and drinking and irrigation water intake systems and issuing a precautionary "do not use" public service announcement regarding water from potentially impacted sources.

EPA Region 9 held a conference call Sunday with Navajo Nation EPA (NNEPA) and Navajo Department of Public Safety.

The Navajo EPA surface water monitoring program (Shiprock office) collected water and sediment samples from the San Juan River—prior to the spill impact. Region 9 has provided 6 contractors to coordinate and conduct increased sample collection and lab analysis in conjunction with NNEPA. This joint EPA/NNEPA river sampling program has commenced focusing on the San Juan between Shiprock/Hogback, New Mexico area and Mexican Hat, Utah and will continue for the foreseeable future.

A Region 9 OSC reported to Farmington on Monday to assist. NNEPA also requested drinking water sampling support immediately for Navajo operated water intakes. NNEPA and USEPA drinking water experts agreed to inventory and assess water sources including private wells and intakes.

Region 9 will be providing assistance to Navajo Tribal Utility Authority to deliver water to the areas impacted by the Gold King Mine Spill—starting with the Montezuma Creek area. NTUA is sourcing the water from their Sweetwater wells and filling up the service tanks in the affected areas. The contractor will be providing assistance in the transportation of these waters.

Two EPA Community Involvement Coordinators (CICs) arrived in Farmington Sunday. The CICs will partner with NNEPA and NN Department of Public Safety to ensure comprehensive outreach to all affected Navajo chapters. The CICs have begun working with local Navajo chapter officials and will participate in public meetings at Aneth and Oljato on 8/10.

Public Health Update

The downward trend in concentrations for metals continues for the sites sampled. The Animas River is an open water source and not considered potable until it has been properly treated.

Washing with soap and water after contact with the river water is a sound public health practice to minimize exposure to the metals, and also any bacteria that maybe present in the untreated river water. Anyone who feels illness as a result of exposure to metals or pathogenic organisms in the river water should contact their local health care provider.

The Agency for Toxic Substances and Disease Registry (ATSDR) recommends that additional monitoring should be conducted until the river returns to pre-release levels. The San Juan Basin Health Department is working with the Rocky Mountain Poison Control and Drug Center (RMPDC). Public or health care providers that have questions should direct their calls to the RMPDC at 1-800-222-1222.

Find additional information about exposure with metals on [ATSDR's website](#).

- [August 9, 2015](#)

Claims Process

A claims process exists for compensating citizens who suffer personal injury or property damage caused by U.S. government actions. The process is available in EPA's regulations at 40 CFR Part 10, and includes guidance on documentation that may be required to support claims for loss of employment and loss of income, among other claims.

Claims for monetary compensation may be filed by submitting a Standard Form 95 specifying the nature of the loss suffered and EPA actions, if known, causing the loss or damage to property, to either of the following contacts:

Richard Feldman
Claims Officer
U.S. EPA Office of General Counsel
1200 Pennsylvania Avenue, NW (MC 2399A)
Washington, DC 20460

Michael Nelson
U.S. EPA Region 8 Office of Regional Counsel
1595 Wynkoop Street (MC 8RC)
Denver, CO 80202

Alternatively, claimants may submit signed electronic versions of Standard Form 95 to EPA for the Gold King Mine Release via email at R8_GKM_Claims@epa.gov beginning Tuesday, August 11, 2015.

[Complete the fillable PDF version of Standard Form 95.](#)

Standard Form 95 is used to present claims against the United States under the Federal Tort Claims Act (FTCA) for property damage, personal injury, or death allegedly caused by a federal

employee's negligence or wrongful act or omission occurring within the scope of the employee's federal employment.

Standard Form 95 is not required to present a claim under the FTCA, but it is a convenient format for supplying the information necessary to bring an FTCA claim. Please note that a completed form must state a claim for money damages in a "sum certain" amount (that is, a specific amount) claimed for personal injury, death, or injury to or loss of property. In addition, if a sum certain is not specified in Standard Form 95 block 12d, or in accompanying information, a submission cannot be considered a valid presentation of a claim.

Although EPA's regulations state that it has six months to resolve a claim, EPA will make every effort to respond to Gold King Mine release claims as soon as possible. Claims must be presented to EPA within two years after the claim accrues.

Mine Discharge Treatment

The flow from the Gold King mine was measured at 548 gallons per minute as of noon on August 8. The mine water is being treated in a series of settling ponds constructed near the portal. The pH (acidity) of the water is being raised with the addition of lime and sodium hydroxide solution to facilitate sedimentation of the metals in the ponds. Flocculant is being added to increase the amount of sedimentation. The treated water that is being discharged to Cement Creek has a pH of 5.5.

ASPECT

This morning, EPA's ASPECT (Airborne Spectral Photometric Environmental Collection Technology) plane observed that the conditions from Farmington to Durango show improvement. While the San Juan River remains discolored, the leading edge of the contaminant plume is no longer visible. These visual observations are a useful indicator; however, water quality data will provide the definitive information about river conditions.

Water Quality Data

Yesterday, EPA collected water quality samples from nine locations in the river near intakes for Aztec, Farmington, Lower Valley Water Users Association, Morning Star Water Supply System and the North Star Water User Association. Each of these locations will continue to monitor as the release makes its way past these areas. In the San Juan River, the release is moving at about 2.5 miles per hour and as of 3 p.m. yesterday it had reached Nenahnezad, New Mexico, approximately 9 miles west of Farmington. EPA's Mobile Command Post arrived in Farmington today. At the request of New Mexico Environmental Department (NMED), EPA is sending additional scientist and technicians to New Mexico to assist with water quality monitoring, sampling and outreach.

Water quality data from throughout the affected region continues to be collected and evaluated. This morning EPA released a detailed data table of the sampling in Cement Creek and the upper

portions of the Animas River from August 5, the date of the incident, and August 6. The data table contains a list of analyzed constituents, largely metals, and their numeric value in micrograms per liter, which is equal to parts per billion, or ppb.

Collection, transport and lab analysis of metals in water is complex and time consuming. Workers at the lab and data experts are working continuously to evaluate and summarize the data.

The incident, which occurred on August 5, caused a spike in concentrations of total and dissolved metals as the contaminated mine water moved downstream. These concentrations began to trend toward pre-event conditions by August 6. August 7 and 8 data, when it is evaluated, will inform whether the trend towards pre-event conditions continues. EPA is working with state and local government officials to determine when to reopen both drinking water intakes and open the river for recreation.

The contaminant plume is depositing sediments and we are assessing the impacts of the sediment.

Discharge Estimates

USGS measured increased flows at a streamgage starting at about 12:30 p.m. and ending about 7:15 p.m. This resulted in a provisional calculated flow volume of 3,043,067 gallons discharged from the Gold King Mine. EPA's original estimate of 1 million gallons discharged from the Gold King Mine was based on an estimate of the size of the adit. A streamgage is an instrument that measures volume by measuring flow, which is much more precise.

EPA Resources Dedicated to the Response

EPA has deployed ten On-Scene Coordinators in Silverton, Durango and Farmington, New Mexico. Water quality experts and several technicians and contractors will respond to the discharge as it reaches communities in New Mexico. Two Public Information Officers (PIOs) are also on site in Durango at the Joint Information Center (JIC). In EPA's regional office in Denver, there are 21 employees and one contractor providing support services to the response. Several incident management team positions will be deployed to Durango on Monday. Two Community Involvement Coordinators (CICs) were deployed to Farmington today and will meet with local Navajo chapter officials and host public meetings in the coming days. The CICs will also partner with Navajo Nation EPA (NNEPA) and Navajo Department of Public Safety to ensure comprehensive outreach to all affected Navajo chapters. EPA has tapped into several contracting mechanisms to provide support for the response, which includes water quality sampling, drinking water and agricultural water distribution as well as construction and maintenance of the water treatment ponds.

List of Work with Local, Tribal, State and Federal Agencies

EPA Region 8 is coordinating the incident with EPA Regions 6 and 9, the states of Colorado,

Utah and New Mexico, and the Navajo Nation and Southern Ute tribes as well as the San Juan County, City of Durango and the Town of Silverton.

EPA Region 8 is coordinating with Agency for Toxic Substances and Disease Registry (ATSDR) in response to public health concerns/questions associated with the mine waste plume. ATSDR has been in communication with local health officials at San Juan County Basin Health Department in Colorado.

The Colorado Fish and Wildlife Conservation Office is monitoring effects on wildlife and aquatic life in the affected area. The Colorado Department of Public Health and Environment is assisting with drinking water concerns.

EPA Region 9 is working with the Navajo Nation and the Bureau of Indian Affairs. The discharge has moved quickly and is in the vicinity of the Navajo Nation boundary, near Kirtland, New Mexico. Navajo officials have reacted quickly, assessing their well fields and drinking and irrigation water intake systems and issuing a precautionary "do not use" public service announcement regarding water from potentially impacted sources. Region 9 held a conference call today with NNEPA and Navajo Department of Public Safety.

The Navajo EPA surface water monitoring program (Shiprock office) collected water and sediment samples from the San Juan River yesterday - prior to the release's impact. Region 9 provided 2 contractors and 4 additional personnel are en route to coordinate and conduct increased sample collection and lab analysis in conjunction with NNEPA.

EPA Region 6 is coordinating with the NMED to determine the potential impacts on water quality in the state and impacted communities that rely on the river. EPA and NMED are providing free water quality testing for private drinking water well owners in the affected area as well as providing water quality monitoring for the five drinking water systems with intakes from the river.

EPA is working with U.S. Fish and Wildlife Service and the U.S. Geological Service.

- August 8, 2015
 - Sampling data from Cement Creek and the Animas River near Silverton from August 5 and 6 show pH and metals concentrations are decreasing to pre-event conditions. We continue to monitor river conditions at multiple locations to detect trends. Rain events and variations in stream flows can cause the pH and metals concentrations to rise and fall.
 - The data show that pH (acidity) levels and dissolved metals in the Cement Creek and the upper portions of the Animas River spiked in the surface water at locations impacted by the contaminant plume. The data shows in the upstream locations the resident time of the plume in any one location was not long lasting. The trend downstream, in the Animas and San Juan Rivers, is expected to be similar or better than upstream, as the contaminant plume passes.
 - Colorado Parks and Wildlife (CPW) officials have been monitoring the effects of the spill on terrestrial and aquatic wildlife since the incident began. CPW is watching for

any impacts on wildlife, whether they are acute or chronic. Fish are especially sensitive to changes in water quality. CPW is also monitoring a control station on a clean tributary.

- Colorado Parks and Wildlife has indicated they are optimistic that the effects of the spill on terrestrial wildlife will be minimal.
- The water in Cement Creek and the Animas River in Silverton is clearing. The adit is still discharging approximately 500 gallons per minute and the trend is that flow is decreasing. The discharge is being diverted into the newly constructed ponds and treated before it enters Cement Creek.

Next Steps

- Continue to treat drainage at mine site.
- Continue to sample the Animas River corridor.
- Evaluate and publish data as they are finalized.
- Continue coordination with state, federal, tribal and local officials as well as community members, landowners and water users.
- Continue to provide drinking water and water testing to private well owners.

Top of Page

- August 7, 2015

On August 5, 2015, EPA was conducting an investigation of the Gold King Mine. The intent of the investigation was to assess the on-going water releases from the mine and to treat mine water and to assess the feasibility of further mine remediation. The plan was to excavate the loose material that had collapsed into the cave entry back to the timbering. During the excavation, the loose material gave way, opening the adit (mine tunnel) and spilling the water stored behind the collapsed material into Cement Creek, a tributary of the Animas River.

Initial estimates are that the release contained approximately one million gallons of water (estimated from the dimensions of the mine adit) that was held behind unconsolidated debris near an abandoned mine portal. There were several workers at the site at the time of the breach, all were unharmed.

The large pulse of water dissipated in about an hour. Today the water in Cement Creek and the Animas River in Silverton is clearing. The adit is still discharging lower flows into Cement Creek. Today, EPA is rebuilding settling ponds to treat these flows – the upper pond will be completed by early afternoon, and the lower pond by COB or early tomorrow. EPA will treat the mine water diverted to the ponds with caustic soda and flocculent once the ponds are built.

We expect conditions will continue to improve in the coming hours and days. As of 10 a.m. today the leading edge of the plume was at 8 miles, as the crow flies (not river miles), from the New Mexico state line. We expect an update on that location later this afternoon. We will continue to coordinate with local, state, tribal and federal officials.

EPA's ASPECT (Airborne Spectral Photometric Environmental Collection Technology) arrived in Santa Fe, New Mexico, last evening to fuel up, and completed a preliminary overflight to determine how far downstream the release has gotten. The flight crew flew this morning from the New Mexico border to the mine to take photographs. The flight crew will fly the river again this afternoon.

EPA is coordinating with ATSDR in response to public health concerns/questions associated with the mine waste plume. ATSDR has been in communication with local health officials at San Juan Basin Health in La Plata County (Durango) and the San Juan County Health Department in Silverton, Colorado. Public health questions/concerns should be directed to Chris Poulet, ATSDR/R8 at 303-312-7013.

EPA Region 8 has been coordinating with Region 6 and Region 9 and the states of Colorado, New Mexico, Utah, and the Southern Ute tribe. Region 6 is working closely with the New Mexico Environment Department (NMED) to evaluate possible impacts in New Mexico. Potentially impacted water systems have been notified and precautions are in place to ensure drinking water in homes is protected. EPA and NMED are providing assistance to community water systems and closely monitoring the situation.

[Top of Page](#)

[Contact Us](#) to ask a question, provide feedback, or report a problem.

● [EPA Home](#)

● [Privacy and Security Notice](#)

● [Accessibility](#)

Last updated on August 12, 2015

● [Hotline](#)

● [News](#)

● [Blog](#)

● [Apps](#)

● [Widgets](#)

Social sites:

● [Twitter](#)

● [Facebook](#)

● [YouTube](#)

●  [Flickr](#)

●  [Instagram](#)

[More social media at EPA »](#)

Greg Weiler, USEPA

1445 Ross Avenue, Dallas, Texas 75202-2733

Phone: 214-665-7564

weiler.gregory@epa.gov

"Out of the long list of nature's gifts to man, none is perhaps so utterly essential to human life as soil."
Hugh Hammond Bennett